

ELECTROCHEMICAL SCREENING SYSTEM

ABSTRACT OF THE DISCLOSURE

5 Devices and methods for evaluating an electrochemical reaction are disclosed. A device includes an electrochemical cell having a cavity for containing a liquidus electrolyte, a first working electrode having at least one electrolytic surface at least partially within the cavity, and a second counter electrode having at least one electrolytic surface at least partially within the cavity. The first working electrode includes a body and an insert supported by the
10 body. The electrolytic surface of the working electrode is formed on or integral with the insert. The insert and body are each formed from a high-temperature material which allows for preparation or processing of the electrolytic surface at a temperature of at least 300°C. The device further includes a drive system detachably coupled to the first working electrode or a portion thereof for effecting
15 relative motion between the electrolytic surface of the working electrode and a bulk portion of the liquidus electrolyte.